

CHAPTER I

INTRODUCTION

I.1 INTRODUCTION

The Federal Land Policy and Management Act of 1976 (FLPMA) directs the United States (US) Department of the Interior, Bureau of Land Management (BLM) to develop and periodically revise or amend its Resource Management Plans (RMPs), which guide management of BLM-administered lands. For the purpose of this document, the term RMP applies to all BLM Land Use Plans (LUPs), including the BLM's older Management Framework Plans.

The BLM is undertaking a large-scale effort to amend or revise RMPs with associated Environmental Impact Statements (EISs) in response to the US Fish and Wildlife Service (USFWS) *12-Month Finding for Petitions to List the Greater Sage-Grouse (Centrocercus urophasianus) as Threatened or Endangered* (75 *Federal Register* 13910, March 23, 2010). In that 12-Month Finding, the USFWS concluded that Greater Sage-Grouse (also referred to as sage-grouse or GRSG) was “warranted, but precluded” for listing as a threatened or endangered species. The USFWS reviewed the status of, and threats to, the GRSG in relation to the five Listing Factors provided in Section 4(a)(1) of the Endangered Species Act (ESA). Of the five Listing Factors reviewed, the USFWS determined that Factor A, “*the present or threatened destruction, modification, or curtailment of the habitat or range of the Greater Sage-Grouse,*” and Factor D, “*the inadequacy of existing regulatory mechanisms.*” posed “*a significant threat to the Greater Sage-Grouse now and in the foreseeable future*” (USFWS 2010a). The USFWS identified conservation measures in RMPs as the BLM's principal regulatory mechanisms.

I.1.1 National Greater Sage-Grouse Planning Strategy

On December 9, 2011, a Notice of Availability was published in the Federal Register to initiate the BLM/US Department of Agriculture (USDA), Forest Service (Forest Service) GRSG Planning Strategy across nine western states, including Northeast California, Oregon, Nevada, Idaho, Utah, and Southwest Montana in the Great Basin Region and Northwest Colorado, Wyoming,

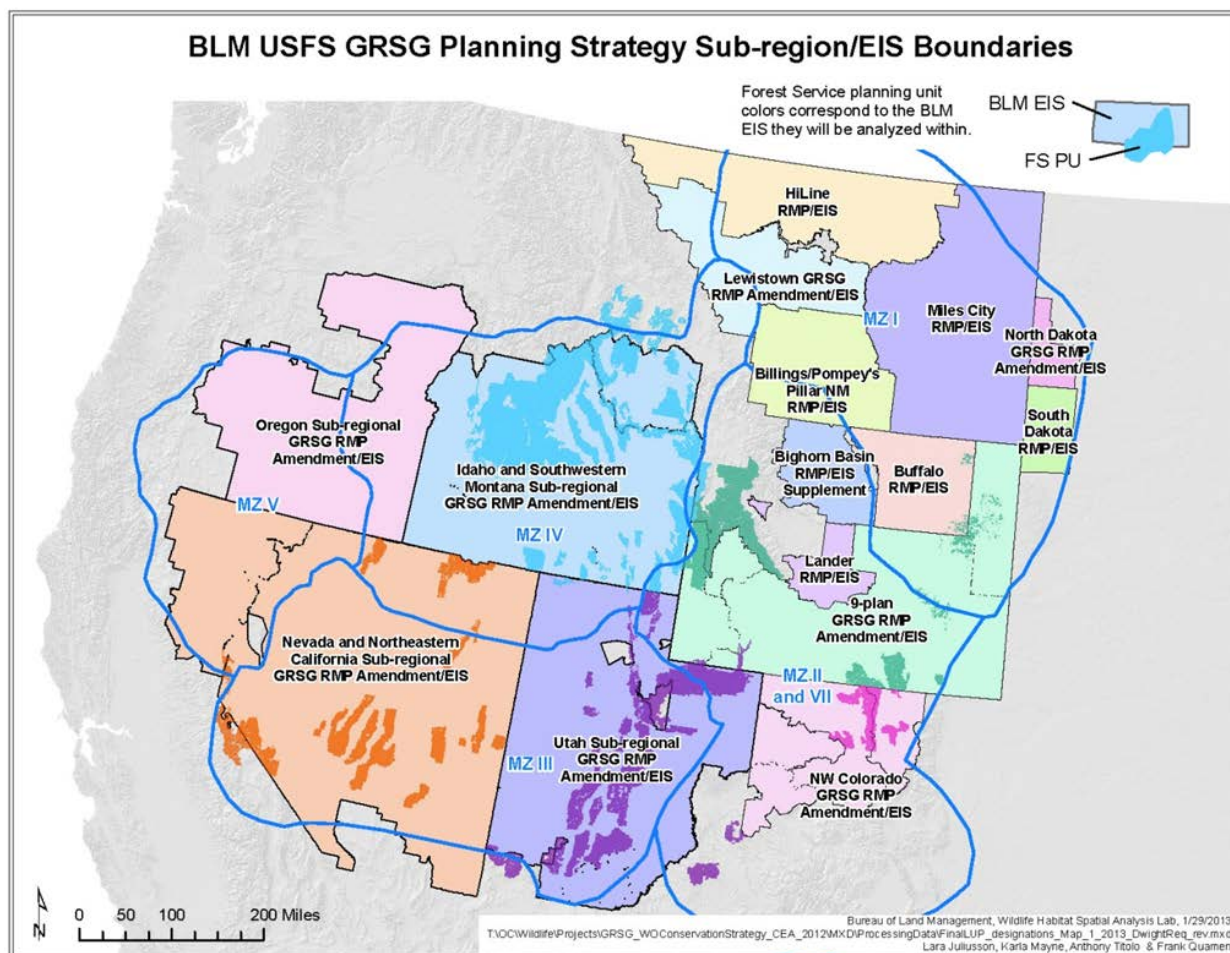
Montana, South Dakota, and North Dakota in the Rocky Mountain Region (**Figure I-1**, BLM and Forest Service GRSG Planning Strategy Sub-Region/EIS Boundaries). The BLM is the lead agency for this planning effort and the Forest Service is participating as a cooperating agency. On February 10, 2012, the BLM published a Notice of Correction that changed the names of the regions that are coordinating the EISs, extended the scoping period, and added 11 Forest Service Land Management Plans to this process. This Draft RMP amendment (RMPA) and Draft EIS is one of 15 separate EISs that are currently being conducted to analyze and incorporate specific conservation measures across the range of the GRSG, consistent with national BLM and Forest Service policy.

On December 27, 2011, the BLM Washington Office released Instruction Memorandum (IM) 2012-044 (BLM 2012a), which directed all of the planning efforts across the GRSG range to consider all applicable conservation measures when revising or amending its RMPs in GRSG habitat, including the measures developed by the National Technical Team (NTT) that were presented in their December 2011 document, *A Report on National Greater Sage-Grouse Conservation Measures* (NTT 2011). The BLM's IM 2012-044 directs all planning efforts associated with the national strategy to consider and analyze, as appropriate, the conservation measures presented in the NTT Report.

The conservation measures identified for consideration were developed by the NTT, a group of resource specialists, land use planners, and scientists from the BLM, state fish and wildlife agencies, USFWS, the Natural Resources Conservation Service, and the US Geological Survey (USGS). The report provides the latest science and best biological judgment to assist in making management decisions relating to the GRSG.

Along with the applicable measures outlined in the NTT Report, planning efforts associated with this National GRSG Planning Strategy will also analyze applicable conservation measures submitted to the BLM and Forest Service from various state governments and from citizens during the public scoping process. It is the goal of the BLM and Forest Service to make a final decision on these plans in 2014 in order to offer sufficient evidence for USFWS to consider that a potential listing for GRSG as a threatened or endangered species under the ESA in 2015 will be unnecessary. Additional information on the NTT Report is provided on the BLM website at <http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife/Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf>.

The BLM issued interim management guidance addressing proposed actions until a listing decision is made regarding the proposed RMPA. The intent of the interim guidance is to promote conservation of sustainable GRSG populations and their habitats while not limiting future options before the amendment process can be completed. BLM IM 2012-043, "Greater Sage-Grouse Interim Management Policies and Procedures", released December 27, 2011, provides

Figure I-1 BLM and Forest Service GRSG Planning Strategy Sub-Region/EIS Boundaries

interim conservation policies and procedures to the BLM field officials to be applied to ongoing and proposed authorizations and activities that affect the GRSG and its habitat (BLM 2012b). It ensures that interim conservation policies and procedures are implemented when field offices authorize or carry out activities on BLM-administered land while the BLM develops and decides how to best incorporate long-term conservation measures for GRSG into applicable RMPs. It promotes sustainable GRSG populations and conservation of its habitat while not closing any future options before the planning process can be completed. Additional information about BLM IM 2012-043 is provided on the BLM website http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2012/IM_2012-043.html

I.1.2 Great Basin Region

In response to the USFWS finding, the BLM and Forest Service are preparing LUP amendments with associated EISs to incorporate specific conservation measures across the range of the GRSG. The planning strategy will evaluate the

adequacy of BLM RMPs and address, as necessary, amendments throughout the range of the GRSG (with the exception of the bi-state Distinct Population Segment in California and Nevada and the Columbia Basin Distinct Population Segment in Washington State, both of which will be addressed through other planning efforts). These EISs have been coordinated under two administrative planning regions: the Rocky Mountain Region and the Great Basin Region. These regions contain the threats identified by the USFWS in the 2010 listing decision and the Western Association of Fish and Wildlife Agencies (WAFWA) Management Zones (MZs) framework (Stiver et al. 2006).

The Rocky Mountain Region includes RMPs in Montana, North Dakota, South Dakota, Wyoming, Colorado, and portions of Utah. This region comprises the WAFWA MZs I (Great Plains), II (Wyoming Basin), and a portion of VII (Colorado Plateau). The USFWS has identified a number of threats in this region, the major ones being habitat loss and fragmentation caused by development (e.g., oil and gas development, energy transmission, and wind energy development).

The Great Basin Region includes RMPs in California, Nevada, Oregon, Idaho, Utah, and Montana. This region comprises the WAFWA MZs III (Southern Great Basin), IV (Snake River Plain), and V (Northern Great Basin). The USFWS has identified a number of threats in this region, the major ones being wildfire, loss of native habitat to invasive species, and habitat fragmentation caused by roads, transmission lines, and agricultural conversion.

The Rocky Mountain and Great Basin regions are further divided into sub-regions, which generally correspond with the WAFWA MZs and threats to GRSG. Each of the seven sub-regions is undertaking a coordinated effort, including developing individual EISs, to incorporate GRSG conservation measures into RMPs that address GRSG habitat. A goal of all such RMPAs is to ensure management consistency across the sub-region, as well as across the range of the GRSG by establishing GRSG conservation measures.

I.1.3 Oregon Sub-Region

The BLM Oregon/Washington State Office is undertaking this Oregon Sub-Region EIS, which analyzes the effects of amending up to eight RMPs in order to provide consistent management of all GRSG habitat on BLM-administered lands in Oregon. While the Forest Service is a cooperating agency at the national level of GRSG planning, the Forest Service is conducting a separate concurrent planning effort of plan revisions in Oregon, incorporating GRSG management guidelines from the NTT report as appropriate.

The proposed RMPAs will identify and incorporate appropriate regulatory mechanisms to conserve, enhance, and restore GRSG habitat and to eliminate, reduce, or minimize threats to this habitat on BLM-administered lands in Oregon. The proposed RMPAs address both Listing Factors A and D (described above) and are intended to provide consistency in the management of GRSG

habitats across Oregon BLM districts. The BLM intends to issue one Record of Decision (ROD) for the RMPAs to be finalized by September 30, 2014, and expects that they, in conjunction with the RODs from the other subregions, will offer sufficient evidence for USFWS to consider preclusion of a potential listing for Greater Sage-Grouse as a threatened or endangered species under the Endangered Species Act. The following RMPs are proposed to be amended through this effort to incorporate appropriate conservation measures:

- Andrews RMP (BLM 2005a)
- Baker RMP (BLM 1989a)
- Brothers LaPine RMP (BLM 1989b)
- Lakeview RMP (BLM 2003a)
- Southeastern Oregon RMP (BLM 2002)
- Steens Mountain Cooperative Management and Protection Area RMP (BLM 2005b)
- Three Rivers RMP (BLM 1992a)
- Upper Deschutes RMP (BLM 2005c)

The BLM intends to incorporate the conservation measures approved in the ROD into the Baker RMP through the ongoing plan revision effort that was initiated in 2008. In the event that the Baker ROD for the plan revision is published prior to the Oregon Sub-region amendment ROD and does not include all of the decisions incorporated into the other plans amended by this effort, the revised Baker RMP will also be amended. If, on the other hand, the revised Baker RMP is not complete by the time the Oregon Sub-Region amendment ROD is to be published, the existing Baker RMP (1989) will also be amended by the Oregon Sub-Region amendment ROD. The John Day RMP and Two Rivers RMP were listed in the December 9, 2011 Notice of Availability that was published in the *Federal Register*. These RMPs have been removed from the Oregon Sub-region planning effort because there are no occupied sage-grouse habitats on BLM-administered lands in these planning areas.

This Draft RMPA and Draft EIS is one of seven LUP amendments that are ongoing within the western states that have GRSG occupied habitat. One goal of all such RMPAs is to ensure consistent management actions across each sub-region, as well as across the range of the GRSG.

The BLM has identified and mapped GRSG habitat in coordination with respective state wildlife agencies. WAFWA also coordinated among states so that habitat along state boundaries matched up where biologically appropriate. This habitat falls into one of the two following categories:

- Preliminary Priority Habitat (PPH): Areas that have been identified as having the highest conservation value to maintaining sustainable

GRSG populations. These areas include breeding, late brood-rearing, and known winter concentration areas.

- Preliminary General Habitat (PGH): Areas of occupied seasonal or year-round habitat outside of preliminary priority habitat.

Through this RMPA/EIS process, the BLM will identify and analyze management actions within GRSG habitat. These management actions will be designed to conserve and, where appropriate, improve GRSG habitat functionality. This will provide for major life history requirements and movements (e.g., breeding, migration, and winter survival) to maintain genetic diversity needed for sustainable GRSG populations.

I.2 PURPOSE AND NEED

The BLM is preparing LUP amendments with associated EISs for LUPs containing GRSG habitat. This effort responds to the USFWS's March 2010 "warranted, but precluded" ESA listing petition decision. In this decision, the USFWS identified the inadequacy of regulatory mechanisms as a significant threat to GRSG. RMP conservation measures were identified as the BLM's principal regulatory mechanism. Changes in management of GRSG habitats are necessary to avoid the anticipated continued decline of populations across the species' range. These RMPAs will focus on areas affected by threats to GRSG habitat identified by the USFWS in the March 2010 listing decision. Additionally the plan amendments will consider information from the Oregon Department of Fish and Wildlife's (ODFW) revised and updated *Greater Sage-Grouse Conservation Assessment and Strategy for Oregon: A Plan to Maintain and Enhance Populations and Habitat* (hereafter "The State Plan"), which provides guidance to public land management agencies and land managers for GRSG conservation (Hagen 2011). The state has responsibility and authority to manage wildlife populations.

The purpose for the RMPAs is to identify and incorporate appropriate conservation measures in RMPs to conserve, enhance and/or restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat. The BLM will consider such measures in the context of its multiple-use sustained yield mandate under the FLPMA and incorporate measures that will help conserve, enhance and/or restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat.

Because the BLM administers a large portion of GRSG habitat within the affected states, incorporating additional conservation measures into relevant BLM RMPs is anticipated to have a considerable beneficial impact on present and future GRSG populations and could reduce the need to list the species under the ESA.

1.3 DESCRIPTION OF THE GREATER SAGE-GROUSE PLANNING AREA

1.3.1 Overview

The planning area is the geographic area within which the BLM will make decisions during this planning effort. The planning area boundary includes all lands regardless of jurisdiction. For this RMPA/EIS, the planning area is the entire Oregon Sub-region. The entire planning area is 31,756,507 acres, which is east of the Cascade Mountains, and contains BLM-administered lands and other lands. The planning area, including mapped PPH and PGH, is shown in **Figure I-2, Oregon Sub-Region Greater-Sage Grouse Planning Area**.

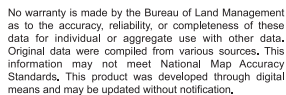
The planning area covers all or a portions of 17 counties in Oregon and one county in Washington. However, PPH and PGH are only found in Baker, Crook, Deschutes, Grant, Harney, Lake, Malheur, and Union counties in Oregon. Lands within the planning area include a mix of private, federal, and state lands (**Table I-1, Surface Land Management of PPH and PGH in the Planning Area**).

Table I-1
Surface Land Management of PPH and PGH in the Planning Area

Surface Land Management	PPH (acres)	PGH (acres)	Total (acres)
BLM	4,546,897	5,662,631	10,209,528
Forest Service	63,824	117,403	181,227
Department of Defense	0	0	0
Department of Energy	8,752	16,382	25,133
National Park Service	0	0	0
USFWS	247,428	51,077	298,506
Bureau of Indian Affairs	18,177	313	18,490
Bureau of Reclamation	23	17,084	17,107
Federal Aviation Administration	0	120	120
General Services Administration	0	455	455
USDA (non-Forest Service)	0	14,064	14,064
Private	1,514,113	1,955,574	3,469,687
State Trust Lands	0	0	0
State, County, and City Lands	156,234	383,434	539,667
Acreage of Water	578	1,318	1,897
Undetermined	0	3,279	3,279
Total	6,556,025	8,223,134	14,779,159

Source: Oregon/Washington BLM 2013

The Burns, Lakeview, Prineville, and Vale Districts administer the eight RMPs being amended by this RMPA/EIS (**Table I-2, BLM RMPs in the Planning Area**). The acres of PPH and PGH occurring on BLM-administered lands and non-BLM-administered lands in the planning area are in **Table I-3, Surface Land Management of PPH and PGH by RMP in the Planning Area**.



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Table I-2
BLM RMPs in the Planning Area

BLM RMP	Total Surface Area (acres)	BLM-Administered Surface Lands (acres)
Andrews	1,682,151	1,217,231
Steens	496,301	428,634
Three Rivers	3,592,993	1,618,569
Lakeview	5,996,474	3,204,121
Brothers LaPine	1,937,377	710,039
Upper Deschutes	2,828,165	403,589
Baker	8,761,664	419,671
Southeastern Oregon	6,461,382	4,616,172
Total	31,756,507	12,618,026

Source: Oregon/Washington BLM 2013

Table I-3
Surface Land Management of PPH and PGH by RMP in the Planning Area

RMP	PPH (acres)		PGH (acres)		PPH and PGH (acres)		Total Habitat (acres)
	BLM	Non-BLM	BLM	Non-BLM	BLM	Non-BLM	
Andrews	398,421	126,195	745,746	254,843	1,144,167	381,038	1,525,204
Steens	208,064	18,884	198,560	45,404	406,625	64,287	470,912
Three Rivers	369,613	188,112	1,047,807	656,928	1,417,420	845,040	2,262,460
Lakeview	975,181	408,758	1,359,553	401,739	2,334,734	810,498	3,145,232
Brothers LaPine	329,424	367,857	210,632	170,394	540,056	538,251	1,078,307
Upper Deschutes	205	13,085	89,660	71,446	89,865	84,531	174,396
Baker	139,234	265,570	66,281	239,346	205,516	504,916	710,432
Southeastern Oregon	2,126,899	620,522	1,944,393	721,151	4,071,292	1,341,673	5,412,965
All RMPs	4,547,043	2,008,984	5,662,631	2,561,250	10,209,674	4,570,234	14,779,908

Source: Oregon/Washington BLM 2013

Although the entire planning area includes various land management entities, the management directions and actions outlined in this RMPA/EIS will apply only to BLM-administered surface lands in the planning area (**Table I-2**) and BLM-administered federal mineral estate that may lie beneath other surface ownership, often referred to as split-estate lands. **Table I-4**, BLM-Administered Mineral Split-Estate by RMP in the Planning Area, shows BLM-administered mineral split-estate beneath private, state, and other federally administered surface lands in the planning area. Because other federal and state surface land managers have management plans in place for their surface lands, the decisions resulting from this planning process will apply to only BLM-

Table I-4
BLM-Administered Mineral Split-Estate by RMP in the Planning Area

BLM RMP	BLM-Administered Federal Mineral Split-Estate (acres)
Andrews	144,286
Steens	39,162
Three Rivers	1,562,731
Lakeview	1,762,809
Brothers LaPine	768,941
Upper Deschutes	1,864,356
Baker	3,379,783
Southeastern Oregon	652,162
Total	10,174,230

Source: Oregon/Washington BLM 2013

administered federal mineral split-estate beneath only private surface lands (2,639,000 acres in the planning area). The acreage of BLM-administered surface lands in the planning area and the acreage of BLM-administered federal mineral split-estate beneath private surface in the planning area are collectively referred to as the decision area. There are 12,618,026 acres of BLM-administered surface lands in the planning area. There are 2,639,000 acres of BLM-administered mineral split-estate beneath private surface lands that are also in the planning area. When combined together, these two areas total 15,257,026 acres (the decision area). The decisions analyzed in the RMPA/EIS are limited to making land use planning decisions specific to the conservation of GRSG and their habitat.

The planning area is covered by two larger WAFWA GRSG Management Zones: Snake River Plain (MZ IV) and Northern Great Basin (MZ V; Figure I-2; Stiver et al. 2006). There are approximately 13.7 and 5.1 million acres of PPH in MZ IV and V, and 4.9 and 4.2 million acres of PGH in MZ IV and V, respectively.

Garton et al. (2011) identified five GRSG populations in Oregon, and two of these are managed by at least three states. Oregon's two largest GRSG populations are in southeast Oregon. The Northern Great Basin population has a minimum population estimate of 9,114 males (Garton et al. 2011), occupies portions of Oregon, Nevada, Idaho, and Utah, and is separated from adjacent populations by 12 to 37 miles and rugged terrain. The Western Great Basin population has a minimum population estimate of 5,904 males (Garton et al. 2011) in southeast Oregon, northwest Nevada, and northeast California and is separated from adjacent populations by approximately 16 miles and unsuitable habitat. The Klamath Falls population in southern Oregon had few birds at leks into the early 1990s, and no sightings have been confirmed since 1993 despite periodic survey efforts. The Baker population in northeast Oregon had a minimum population estimate of 872 to 1,650 birds in 2010 (Hagen 2011) and appears to be separated by topography and unsuitable habitat from the nearest

population in Weiser, Idaho, by approximately 20 miles. However, movements of radio-equipped GRSG from Oregon into Idaho in 2009 and 2010 appear to indicate some connection. Additional leks have been found in the Baker area in the last few years as result of surveys for the proposed Boardman-Hemingway 500-kV Transmission Line Project. Finally, the Central Oregon population is relatively large with a minimum population estimate of 835 males (Garton et al. 2011) and is separated by rugged terrain and approximately 19 miles from adjacent populations (i.e., Western Great Basin and Northern Great Basin populations) (USFWS 2013a).

I.3.2 Land Uses

Land uses occurring within GRSG habitat include energy and mineral development; recreation; livestock grazing; and rights-of-way (ROWs) (including but not limited to roads, pipelines, power lines, and communication sites). BLM-administered lands within the habitat are generally open to mineral uses including leasable, locatable, and mineral material with a few exceptions, but not all available lands are currently under a lease.

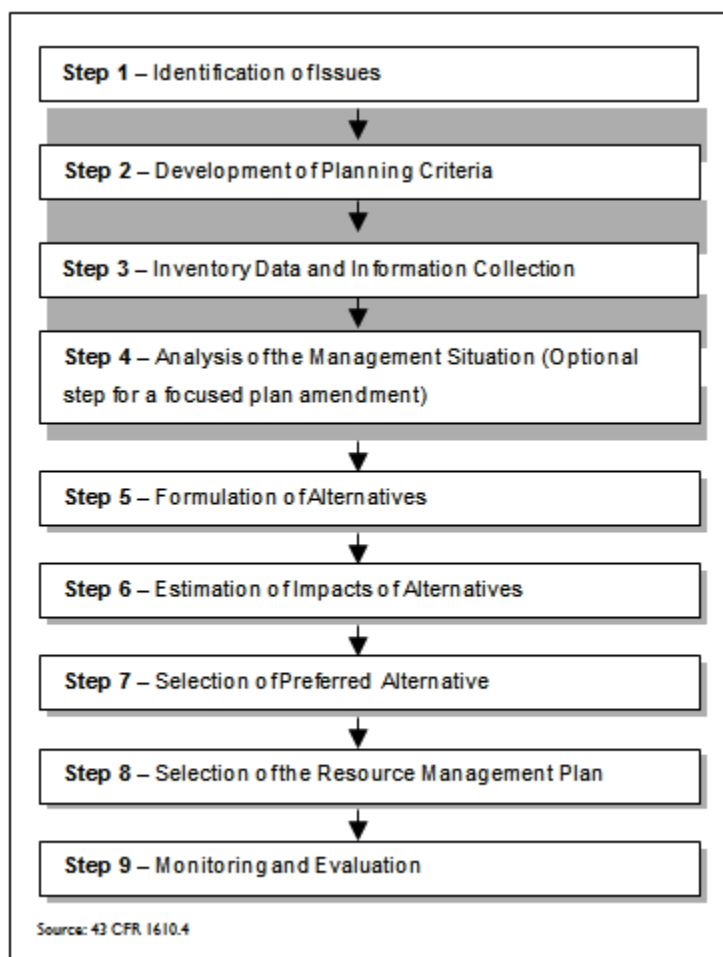
I.4 PLANNING PROCESSES

I.4.1 BLM Planning Process

The FLPMA requires the BLM to use RMPs as tools by which "present and future use is projected" (43 United States Code [USC] 1701[a][2]). The FLPMA's implementing regulations for planning (43 Code of Federal Regulations [CFR] Part 1600), state that RMPs are a preliminary step in the overall process of managing BLM-administered lands and are "designed to guide and control future management actions and the development of subsequent, more detailed and limited scope plans for resources and uses" (43 CFR Part 1601.0-2). Public participation and input are important components of land-use planning.

Under BLM regulations, approval of an EIS-level RMP revision or amendment is considered a major federal action that may significantly affect the quality of the human environment and therefore requires disclosure and documentation of environmental effects as described in the National Environmental Policy Act (NEPA). Thus, this EIS accompanies the amendment of the existing RMPs. This EIS analyzes the impacts of six alternatives for the Oregon Greater Sage-Grouse RMPA/EIS, including the No Action Alternative.

The BLM uses a nine-step planning process (**Figure I-3, Nine-step BLM RMP Planning Process**) to develop or revise RMPs (43 CFR Part 1600 and planning program guidance in BLM Handbook H-1601-1, Land Use Planning Handbook [BLM 2005d]). The planning process is designed to help the BLM identify the uses of BLM-administered lands desired by the public and to consider these uses to the extent they are consistent with the laws established by Congress and the policies of the executive branch of the federal government.

Figure I-3 Nine-step BLM RMP Planning Process

Once an RMP is approved, it may be changed through amendment. An amendment can be initiated in response to monitoring and evaluation findings, new data, new or revised policy, a change in circumstances, or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions, and decisions of the approved plan. If the BLM decides to prepare an EIS, the amending process shall follow the same procedure required for preparation and approval of the plan, but the focus shall be limited to that portion of the plan being amended (43 CFR 1610.5-5).

As depicted in **Figure I-3**, the planning process is issue-driven (Step 1). The planning process is undertaken to resolve management issues and problems as well as to take advantage of management opportunities. The BLM utilizes the public scoping process to identify planning issues to direct (drive) a revision or amendment of an existing plan. The scoping process also is used to introduce the public to preliminary planning criteria, which set the parameters or “sideboards” for conducting the planning process (Step 2).

The BLM uses existing data from files and other sources and collects new data to address planning issues and to fill data gaps identified during public scoping (Step 3). Using these data, information concerning the resource management programs, and the planning criteria, the BLM completes an Analysis of the Management Situation (AMS) (Step 4) to describe current management and develop or inform the affected environment portion of the RMP. Typically, the AMS is conducted at the outset of planning for an entire RMP or RMP revision and is incorporated by reference into development of a single focus plan amendment. In this case, direction for the plan amendment is provided through new national policy (BLM 2012a). The affected environment is also incorporated by reference into the amendment and updated with new information to the degree necessary to set the context for the analysis in the accompanying EIS.

Results of the first four steps of the planning process clarify the purpose and need and identify key planning issues that need to be addressed by the amendment. Key planning issues reflect the focus of the RMPA and are described in more detail in **Section 1.5.2**, below.

Alternatives constitute a range of management actions that set forth different priorities and measures to emphasize certain uses or resource values over other uses or resource values (usually representing a continuum from extraction and development to preservation/conservation) pursuant to the multiple-use and sustained yield mandate, so as to achieve certain goals or objectives consistent with the purpose and need. During alternative formulation (Step 5), the BLM collaborates with cooperating agencies to identify goals and objectives (desired outcomes) for resources and resource uses within the planning area. The alternatives represent a reasonable range of planning strategies for managing resources and resource uses. Chapter 2 of this document, Alternatives, describes and summarizes the Preferred Alternative and the other draft alternatives considered in detail.

This Draft RMPA/Draft EIS also includes an analysis of the impacts of the Preferred Alternative and the other draft alternatives in **Chapter 4**, Environmental Consequences of Draft Plan and Draft Alternatives, (Step 6). With input from cooperating agencies and BLM specialists, and consideration of planning issues, planning criteria, and the impacts of alternatives, the BLM identifies and recommends a Preferred Alternative from among the alternatives presented in the EIS (Step 7). This is documented in the Draft RMPA/EIS, which is then distributed for a 90-day public review and comment period.

Step 8 of the land-use planning process occurs following receipt and consideration of public comments on the Draft RMPA/Draft EIS. In preparing the Proposed RMPA/Final EIS, the BLM will consider all comments received during the public comment period. The Proposed RMPA will be crafted from the draft alternatives.

Step 9 is the monitoring and evaluation process. Monitoring is the repeated measurement of activities and conditions over time. Evaluation is a process in which the plan and monitoring data are reviewed to see if management goals and objectives are being met and if management direction is sound. Monitoring data gathered over time are examined and used to draw conclusions on whether management actions are meeting stated objectives, and if not, why. Conclusions are then used to make recommendations on whether to continue current management or what changes need to be made in management practices to meet objectives.

LUP monitoring is the process of tracking the implementation of land use planning decisions and collecting and assessing data/information necessary to evaluate the effectiveness of land use planning decisions. The two types of monitoring are described below.

- **Implementation Monitoring:** Implementation monitoring is the most basic type of monitoring and simply determines whether planned activities have been implemented as prescribed by the plan. Some agencies call this compliance monitoring. This monitoring documents the BLM's progress toward full implementation of the RMP decision. There are no specific thresholds or indicators required for this type of monitoring.
- **Effectiveness Monitoring:** Effectiveness monitoring is aimed at determining if the implementation of activities has achieved the desired goals and objectives. Effectiveness monitoring asks the question: Was the specified activity successful in achieving the objective? This requires knowledge of the objectives established in the RMP as well as indicators that can be measured. Indicators are established by technical specialists in order to address specific questions, and thus to focus on collection of only necessary data. Success is measured against the benchmark of achieving desired future conditions established by the plan.

Regulations at 43 CFR 1610.4-9 require that the proposed plan establish intervals and standards, as appropriate, for monitoring and evaluation of the plan, based on the sensitivity of the resource decisions involved. Progress in meeting the plan objectives and adherence to the management framework established by the plan is reviewed periodically. This periodic review will provide consistent tracking of accomplishments and information that can be used to develop annual budget requests to continue implementation.

LUP evaluations will be used by the BLM to determine if the decisions in the RMP, supported by the accompanying NEPA analysis, are still valid. Evaluation of the RMP will generally be conducted every five years per BLM policy, unless unexpected actions, new information, or significant changes in other plans, legislation, or litigation trigger an earlier evaluation. LUP evaluations determine if

the RMP decisions are being implemented, whether decisions are effective in achieving or making progress towards desired outcomes, whether there are significant changes in the related plans of other entities, whether there are new data of significance to the plan, and if decisions should be changed through amendment or revision. Evaluations will follow the protocols established by the BLM Land Use Planning Handbook H-1601-1 (BLM 2005d) in effect at the time the evaluation is initiated. Specific monitoring and evaluation needs are identified by resource/uses throughout Chapter 2.

I.4.2 Eco-regional Context and Landscape Planning Approach

Public lands are undergoing complex environmental challenges that go beyond traditional management boundaries. In response, the BLM is instituting a landscape-scale management approach which evaluates large areas to better understand the ecological values, human influences, and opportunities for resource conservation. This approach frequently allows identification of environmental changes that might not be apparent in smaller areas.

The BLM's landscape approach includes Rapid Ecoregional Assessments (REAs) which provide a framework for integrating science and management. REAs evaluate landscape scale ecoregions, which are large areas with similar environmental characteristics. The BLM has initiated fourteen REAs since 2010. The Oregon Sub-region lies within the Northern Great Basin ecoregion.

REAs synthesize the best available information to examine ecological values, conditions, and trends within the ecoregion. Assessments of these larger areas provide land managers additional information and tools to use in subsequent resource planning and decision-making.

REAs describe and map conservation elements, which are areas of high ecological value. REAs look across all lands in an ecoregion to identify regionally important habitats for fish, wildlife, and species of concern. REAs then gauge the potential of these habitats to be affected by four overarching environmental change agents: climate change, wildfires, invasive species, and development (both energy development and urban growth). REAs also help identify areas that do not provide essential habitat; that are not ecologically intact or readily restorable; and where development activities may be directed to minimize impacts on important ecosystem values.

In the Oregon Sub-region, the Northern Great Basin ecoregion REA was initiated in 2011 and is anticipated to be completed in late 2013. The Northern Great Basin ecoregion REA will be used to inform and enhance the quality of resource management and environmental analysis at the landscape level as the information becomes available. The REA information is considered in the development of management objectives that can be adapted to the changing environment. This REA will aid in identifying priority areas for conservation and development, including important areas for wildlife habitat and migration corridors. The landscape-level REAs allow the BLM to collaborate beyond the

usual jurisdictional boundaries with the goal of conserving the native ecological communities, traditional uses, and help maintain the rural culture that makes this area so unique.

Additional information about the Landscape Approach is provided on BLM website http://www.blm.gov/wo/st/en/prog/more/Landscape_Approach.html.

As REAs are completed the information about each REA is posted on the REA website. The website includes published REA reports and the REA data portal. The data portal provides access to an interactive map and downloadable data. Additional information is provided on BLM Northern Great Basin REA website at http://www.blm.gov/wo/st/en/prog/more/Landscape_Approach/reas/nbasinrange.html.

I.5 SCOPING AND IDENTIFICATION OF ISSUES FOR DEVELOPMENT OF THE PROPOSED PLAN AND DRAFT ALTERNATIVES

I.5.1 The Scoping Process

Scoping is an early and open process for determining the scope, or range, of issues to be addressed and for identifying the significant issues to consider in the planning process. Scoping identifies the affected public and agency concerns, defines the relevant issues and alternatives that will be examined in detail in the EIS, and eliminates those that are not relevant. A planning issue is defined as a controversy or dispute regarding management or uses on BLM-administered lands that can be addressed through a range of alternatives. The environmental impacts of these alternative management scenarios are analyzed and addressed in the Draft EIS.

Scoping is designed to be consistent with the public involvement requirements of FLPMA and NEPA. The cooperative process included soliciting input from interested state and local governments, tribal governments, other federal agencies and organizations, and individuals, to identify the scope of issues to be addressed in the plan amendment, and to assist in the formulation of reasonable alternatives. As part of the scoping process, the BLM also requested that the public submit nominations for potential Areas of Critical Environmental Concern (ACECs) for GRSG and their habitats.

The scoping period for the Oregon Sub-region GRSG RMPAs, along with the other sub-regional efforts, began on December 9, 2011. It was extended through a Notice of Correction published February 10, 2012, and ended on March 23, 2012. Scoping in January 2012 included open-house meetings in Baker City, Burns, Lakeview, Ontario, and Prineville. News releases were used to notify the public regarding the scoping period and the planning process and to invite the public to provide written comments from many sources including via email, fax, and regular mail. Comments obtained from the public during the scoping period were used to define the relevant issues to be addressed by a reasonable range of alternatives.

For the Oregon Sub-region planning process, scoping comments received from the public were placed in one of three categories:

1. Issues identified for consideration in the Oregon Greater Sage-Grouse RMPA/EIS
2. Issues to be addressed through policy or administrative action (and therefore not addressed in the RMPA/EIS)
3. Issues eliminated from detailed analysis because they are beyond the scope of the RMPA/EIS (and therefore not addressed in the RMP)

1.5.2 Issues identified for consideration in the Oregon Sub-Region Greater Sage-Grouse RMP Amendments

Some important issues to be addressed in this RMPA/EIS were identified by the public and the agencies during the scoping process for the range-wide planning effort. The Scoping Summary Report, prepared in conjunction with this RMPA/EIS, summarizes the scoping process (BLM and Forest Service 2012). The issues identified in the Scoping Report fall into one of 13 broad categories (**Table 1-5**, Range-Wide Planning Issue Categories and Statements). Issue statements are listed based on the public comments received for each category. Other resource and use issues are identified in the BLM Land Use Planning Handbook (H-1601-1; BLM 2005d). All of these issues were considered in developing the alternatives brought forward for analysis.

Table 1-5
Range-Wide Planning Issue Categories and Statements

Planning Issue Category	Planning Issue Statement
Greater Sage-Grouse and Sage-Grouse habitat	How would the BLM use the best available science to designate PPH, PGH, and non-habitat categories and accurately monitor the impact of land uses on GRSG?
Energy and mineral development	How would energy and mineral development, including renewable energy development, be managed within GRSG habitat while recognizing valid existing rights?
Livestock grazing	What measures would the BLM put in place to protect and improve GRSG habitat while maintaining grazing privileges?
Vegetation management	How would the BLM conserve, enhance, or restore GRSG habitat such as sagebrush communities and minimize or prevent the introduction or spread of noxious weeds and invasive species?
Fish and wildlife	What measures would be put in place to manage habitat for other wildlife species and reduce conflicts with GRSG?
Lands and realty	What opportunities exist to adjust public land ownership that would increase management efficiency for GRSG and GRSG habitat?
Social, economic, and environmental justice	How could the BLM promote or maintain activities that provide social and economic benefit to local communities while providing protection for GRSG habitat?

Table I-5
Range-Wide Planning Issue Categories and Statements

Planning Issue Category	Planning Issue Statement
Recreation and travel management	How would motorized, non-motorized, and mechanized travel be managed to provide access to federal lands and a variety of recreation opportunities, while protecting GRSG and GRSG habitat?
Fire	What measures should be undertaken to manage fuels and wildland fires, while protecting GRSG habitat?
Special management areas	What special management areas would be designated by the BLM to benefit the conservation, enhancement, and restoration of GRSG and GRSG habitat?
Water and Soil	How would the BLM protect water and soil resources in order to benefit GRSG habitat?
Drought/climate change	How would the BLM incorporate the impacts of a changing climate on GRSG habitat?
Wild horse and burro	What measures would the BLM put in place to reduce the impacts of wild horses and burros on GRSG habitat?

Key issues specifically discussed in the Oregon Sub-region comments included energy and mineral development, social issues, economic issues, fire management, livestock grazing, vegetation management, special management areas, wildlife, and recreation. General planning issue statements stated above in **Table I-5** are also applicable for the Oregon Sub-region. In addition, the following issues were identified:

- **Energy and Mineral Development:** How will current and potential mineral extraction in the planning area be managed to minimize economic impacts and allow for GRSG conservation?

I.5.3 Issues to be Addressed Through Policy or Administrative Action and Not Addressed in the LUP Amendments

Policy or administrative actions are those that the BLM implements because they are standard operating procedure, federal law requires them, or they are BLM policy. They are, therefore, issues that are eliminated from detailed analysis in this planning effort. Administrative actions do not require a planning decision to implement.

I.5.4 Issues Not Addressed in the LUP Amendments

The following issues were determined to be outside the scope of the range-wide planning effort, including the Oregon Greater Sage-Grouse RMPA/EIS:

- **Hunting Greater Sage-Grouse**—Commenters questioned why GRSG hunting is allowed if the bird is in need of protection. Hunting is an allowed use on BLM-administered lands and is regulated by

state wildlife agencies. Comments regarding hunting relate to state-regulated actions and are outside the scope of the plan amendment.

- **Predator control**—Commenters stated that control was needed to protect GRSG from predation. The ODFW possesses primary authority and responsibility for managing the wildlife within the state, while the BLM is responsible for managing habitat. Consistent with a Memorandum of Understanding (MOU) between the BLM and USDA, Animal and Plant Health Inspection Service-Wildlife Services, the BLM would continue to work with the ODFW to meet state wildlife population objectives. Predator control is allowed on BLM-administered lands and is regulated by the ODFW; these comments therefore relate to state-regulated actions and are outside the scope of the plan amendment. The BLM will continue to work with agencies to address current predation of GRSG. The BLM-administered lands in the planning area will remain open to predator control under state laws.
- **Warranted but precluded decision and management under ESA listing**—Commenters questioned population levels and the need to incorporate range-wide conservation measures. Others questioned the effectiveness of ESA listing as a method of species conservation. These comments relate to decisions under the purview of the USFWS and are not addressed in this plan amendment. The listing of GRSG by the USFWS may include conservation measures identified by the USFWS, however, those conservation measures are not known at this time. Therefore, the BLM cannot address those speculative measures as part of its land use planning effort.
- **Elimination of livestock grazing on all BLM-administered lands**—Commenters asked that grazing be limited or completely stopped on all BLM-administered lands due to detrimental ecosystem effects. Others stated that national grazing policies should be reformed as the requirements are too limiting and impact ranchers' livelihoods. In addition, some commenters state that grazing provides habitat enhancements for certain sensitive species. Decisions about livestock grazing national policies are outside the scope of this amendment and are not made in this planning effort.

However, this document is specific to PPH and PGH, and not all BLM-administered lands. The reduction of livestock (i.e., permitted grazing use) in GRSG habitat within the decision area is considered in Alternatives C, D, and F.

- **Renewable energy policies**—Commenters stated concerns about renewable energy development, including economic instability due to government subsidies and risk of wildlife deaths, specifically bats and birds. General policy decisions about renewable energy

management on BLM-administered lands will be determined by national policy and are not addressed in this plan amendment.

I.6 DEVELOPMENT OF PLANNING CRITERIA

Planning criteria are based on appropriate laws, regulations, BLM Manual and Handbook sections, and policy directives, as well as on public participation and coordination with cooperating agencies, other federal agencies, state and local governments, and Native American tribes. Planning criteria are the standards, rules, and factors used as a framework to resolve issues and develop alternatives. Planning criteria are prepared to ensure decision making is tailored to the issues and to ensure that the BLM avoid unnecessary data collection and analysis. The preliminary planning criteria are:

- The BLM will utilize the WAFWA *Conservation Assessment of Greater Sage-Grouse and Sagebrush Habitats* (Connelly et al. 2004), and any other appropriate resources, to identify GRSG habitat requirements and best management practices.
- The approved RMPA will be consistent with BLM IM 2012-044, BLM National Greater Sage-Grouse Land Use Planning Strategy (BLM 2012a).
- The approved RMPA will comply with FLPMA, NEPA, and Council on Environmental Quality (CEQ) regulations at 40 CFR 1500 - 1508 and Department of the Interior regulations at 43 CFR 46 and 43 CFR 1600; the BLM H-1601-1 Land Use Planning Handbook (BLM 2005d), "Appendix C: Program-Specific and Resource-Specific Decision Guidance Requirements" for affected resource programs; the 2008 BLM NEPA Handbook (H-1790-1; BLM 2008a), and all other BLM policies and guidance.
- The RMPA will be limited to making land use planning decisions specific to the conservation of GRSG habitats.
- The BLM will consider allocations, objectives, and management actions to restore, enhance, and improve GRSG habitat.
- The RMPA will recognize valid existing rights.
- Lands addressed in the RMPA will be BLM-administered lands (including surface-estate and split-estate lands) in GRSG habitats. Any decisions in the RMPA will apply only to federal lands administered by the BLM.
- The BLM will use a collaborative and multi-jurisdictional approach, where appropriate, to determine the desired future condition of BLM-administered lands for the conservation of GRSG and their habitats.

- As described by law and policy, the BLM will strive to ensure that conservation measures are as consistent as possible with other planning jurisdictions within the planning area boundaries.
- The BLM will consider a range of reasonable alternatives, including appropriate management prescriptions that focus on the relative values of resources while contributing to the conservation of GRSG and GRSG habitat.
- The BLM will address social and economic impacts of the alternatives. Social and economic analyses will use an accepted input-output quantitative model such as IMPLAN or RIMSII, and/or JEDI for renewable energy analysis.
- The BLM will endeavor to use current scientific information, research, technologies, and results of inventory, monitoring, and coordination to determine appropriate local and regional management strategies that will enhance or restore GRSG habitats.
- Management of GRSG habitat that intersects with Wilderness Study Areas (WSAs) on BLM-administered lands will be guided by BLM Manual 6330 (BLM 2012c). Land use allocations made for WSAs must be consistent with this manual and with other laws, regulations, and policies related to WSA management. Management of GRSG habitat will also be guided by the BLM manuals on Wilderness (Manual Section 6340); Steens Mountain Cooperative Management and Protection Area (National Monument/National Conservation Area Manual Section 6220); Wild and Scenic Rivers (Manual Section 6400); and National Historic Trails (Manual Section 6280).
- For BLM-administered lands, all activities and uses within GRSG habitats will follow existing land health standards. Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington (BLM 1997) and other programs that have developed standards and guidelines will be applicable to all alternatives for BLM-administered lands.
- The BLM will consult with Native American tribes to identify sites, areas, and objects important to their cultural and religious heritage within GRSG habitats.
- The BLM will coordinate and communicate with state, local, and tribal governments to ensure that the BLM considers provisions of pertinent plans; seeks to resolve inconsistencies between state, local, and tribal plans; and provides ample opportunities for state, local, and tribal governments to comment on the development of amendments.

- The BLM will develop vegetation management objectives, including objectives for managing noxious weeds and invasive species (including identification of desired future condition for specific areas), within GRSG habitat.
- The RMPA will be based on the principles of adaptive management.
- The RMPA will be developed using an interdisciplinary approach to prepare reasonably foreseeable development scenarios, identify alternatives, and analyze resource impacts, including cumulative impacts on natural and cultural resources and the social and economic environment.
- Reasonably foreseeable development scenarios and planning for fluid minerals will follow the BLM Handbook H-1624-I and current fluid minerals manual guidance for fluid mineral (oil and gas, coal-bed methane, oil shale) and geothermal resources (BLM 1990). Reasonably foreseeable development scenarios were not completed for mineral potentials and developments in Oregon.
- The most current approved BLM corporate spatial data will be supported by current metadata and will be used to ascertain GRSG habitat extent and quality. Data will be consistent with the principles of the Information Quality Act of 2000.
- ODFW's GRSG data and expertise will be utilized to the fullest extent practicable in making management determinations on BLM-administered lands.

I.7 RELATIONSHIP TO OTHER POLICIES, PLANS, AND PROGRAMS

This planning process will recognize the many ongoing programs, plans, and policies that are being implemented in the planning area by other land managers and government agencies. The BLM will seek to be consistent with or complementary to other management actions whenever possible.

I.7.1 Programmatic National-Level EIS Documents

Nation-wide plans that need to be considered during the GRSG planning effort include the following:

- Vegetation Treatment on BLM Lands in Thirteen Western States (BLM 1991; common to the Proposed Plan and draft alternatives)
- Final Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement and Associated Record of Decision. (FES 07-21; BLM 2007a)
- Approved Resource Management Plan Amendments/Record of Decision for Designation of Energy Corridors on BLM-Administered Lands in the 11 Western States. January 2009 (DOE and BLM 2009).

- Record of Decision and Resource Management Plan Amendments for Geothermal Leasing in the Western United States (BLM 2008b)
- Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-administered Lands in the Western United States (FES 05-11; BLM 2005e)
- Final Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (BLM 2012d)

I.7.2 State Plans

The BLM recognizes the importance of state plans, as well as plans developed by other federal agencies and tribal governments. State plans considered during the GRSG planning effort include the following:

- ODFW *Greater Sage-Grouse Conservation Assessment and Strategy for Oregon: A Plan to Maintain and Enhance Populations and Habitat* (Hagen 2011). Additional information on the State Plan is provided on the ODFW website http://www.dfw.state.or.us/wildlife/sagegrouse/docs/20110422_GRSG_April_Final%2052511.pdf.

I.7.3 County Land Use Plans

The BLM recognizes the importance of local plans. Local LUPs considered during the GRSG planning effort include those for the following counties:

- Asotin County, Washington
- Baker County, Oregon
- Crook County, Oregon
- Deschutes County, Oregon
- Gilliam County, Oregon
- Grant County, Oregon
- Harney County, Oregon
- Hood River County, Oregon
- Jefferson County, Oregon
- Lake County, Oregon
- Malheur County, Oregon
- Morrow County, Oregon
- Sherman County, Oregon
- Umatilla County, Oregon
- Union County, Oregon
- Wallowa County, Oregon

- Wasco County, Oregon
- Wheeler County, Oregon

I.7.4 Memorandums of Understanding

The BLM entered into MOUs with the following cooperating agencies:

- Crook County
- Deschutes County
- Harney County
- Lake County
- Malheur County
- Harney Soil and Water Conservation District
- ODFW
- USFWS

The purpose of these MOU is to establish cooperating agency relationships for the purpose of cooperating in and conducting an environmental analysis and preparing the draft and final programmatic EIS for the Oregon GRSG amendments.

I.7.5 Activity Plans and Amendments

Numerous activity plans have been developed to implement the eight RMPs addressed by the Oregon Sub-region amendment effort. As soon as practicable after the signing of the ROD, activity plans that conflict with the GRSG amendments should be amended to come into compliance with the applicable RMP. New activity plans may also be developed in the future and would be consistent with the GRSG amendments.

I.7.6 Habitat Management Plans (HMP)

A Habitat Management Plan (HMP) provides guidance for the management of a defined habitat for a target wildlife species, protecting and improving habitat for that species and for other species utilizing the habitat. These plans are usually written in coordination with State Wildlife Agencies. The following HMPs are over 20 years old and involve areas covered by the 8 RMPs:

- Warner Wetlands HMP - Wetlands Management
- Rosebud HMP - Wetlands Management
- North Warner HMP - Big Game Management
- South Warner HMP - Big Game Management

I.7.7 Vegetation Management Policies

BLM vegetation management involves all programs that rely on healthy plant species and communities to meet their objectives. The BLM's overarching goal for vegetation management is, through an interdisciplinary collaborative process, to plan and implement a set of actions that improve biological diversity and ecosystem function and which promote and maintain native plant communities that are resilient to disturbance and invasive species. Federal laws and regulations guiding vegetation management include the following:

- Carlson-Foley Act, 1968
- Federal Land Policy and Management Act, 1976
- Federal Noxious Weed Act, 1974
- National Environmental Policy Act, 1969
- Noxious Weed Control Act, 2004
- Plant Protection Act, 2000
- Public Rangelands Improvement Act, 1978
- Taylor Grazing Act, 1934

Vegetation treatment is fundamental to BLM vegetation management. Policies and plans related to vegetation treatment include the following:

- Department Manual 620 - Wildland Fire Management, Chapter 3, Burned Area Emergency Stabilization and Rehabilitation (DOI 2004)
- BLM Manual 9015, Integrated Weed Management (BLM 1992b)
- Burned Area Emergency Stabilization and Rehabilitation Handbook (H-1742-1; BLM 2007b)
- National Fire Plan, 2001
- Pulling Together: National Strategy for Invasive Plant Management (Federal Interagency Committee for Management of Noxious and Exotic Weeds 1998)
- National Cohesive Wildland Fire Management Strategy: Western Regional Assessment and Strategy (Forests and Rangelands 2011)

I.7.8 BLM Direction

BLM direction includes the following:

- Migratory Bird Treaty Act – Interim Management Guidance (IM 2008-050)
- Special Status Species Management (BLM Manual 6840)
- Wildlife and Fisheries Management (BLM Manual 6500)

- Aquatic Resources Management (BLM Manual 6720)

I.7.9 Conservation Objectives Team Report

The USFWS wanted to work in advance of its 2015 listing decision to develop conservation objectives for the GRSG that could help direct conservation actions for the species. The USFWS created a Conservation Objectives Team (COT) of state experts and USFWS representatives to accomplish this task. The team developed *Greater Sage-grouse (Centrocercus urophasianus) Conservation Objectives: Final Report* (COT Report), which identifies key areas for GRSG, key threats in those areas, and the extent to which they need to be reduced in order for the species to be conserved and for the USFWS to determine that listing is not warranted (USFWS 2013a). The COT Report establishes conservation objectives for the primary habitat threats identified in the March 2010 USFWS finding that listing of the GRSG was warranted but precluded. Those objectives could be met through local planning efforts, BLM planning efforts, and state efforts. The highest level objective identified in the COT Report is identified as to meet the objectives of the 2006 WAFWA Greater Sage-grouse Comprehensive Strategy of “reversing negative population trends and achieving a neutral or positive population trend.”

The COT Report identifies the threats to be addressed to meet overall conservation objectives, and BLM’s NTT report provides management recommendations for the species across its entire range that could be implemented to address the threats. Because the range of the species is so large, and local ecological conditions vary, it is possible that local management decisions may differ from the specific standards in the NTT report. If the local plan decisions vary from the NTT report, the differences will be justified by scientific or local information. **Chapter 4** explains the threats to GRSG that are identified in the COT Report. The anticipated impacts on GRSG from implementing a proposed action are evaluated in terms of achieving COT Report objectives.

Additional information on the COT Report is provided on the USFWS website <http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/COT/COT-Report-with-Dear-Interested-Reader-Letter.pdf>.

I.7.10 Baseline Environmental Report

To augment this planning document at a biologically meaningful scale for GRSG, a Baseline Environmental Report (BER) for GRSG was produced by the USGS (Manier et. al. 2013). The BER is a science support document that provides information to put planning units and issues into the context of the larger WAFWA Greater Sage-Grouse Management Zones. The BER examines each threat identified in the USFWS’s listing decision published on March 15, 2010. For each threat, the BER summarizes the current, scientific understanding of various impacts on GRSG populations and habitats. When available, the BER also reports patterns, thresholds, indicators, metrics, and measured responses

that quantify the impacts of each specific threat. **Chapter 3**, Affected Environment, contains GRSG information from the BER. When available, this information is supplemented with more specific information. Additional information on the BER is provided on the USGS website <http://pubs.usgs.gov/of/2013/1098/>.

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